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09/11/98 07/21/98 GOTH

M 0083-0865-2

EXAMINER

022850 MM91/0313
OBLON SPIVAK M. LELLAND MAIER & NEUSTADT
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON VA 22202

ART UNIT PAPER NUMBER

2841

24

DATE MAILED: 03/13/01

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 1/24/01 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire _____ month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☐ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☒ Notice of Art Cited by Applicant, PTO-1449: (page # 21)
- ☐ Notice of Informal Patent Application, PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐ _____

Part II SUMMARY OF ACTION

- ☒ Claims 7, 9, 13-15 are pending in the application.
Of the above, claims 15 are withdrawn from consideration.
- ☐ Claims _____ have been cancelled.
- ☐ Claims _____ are allowed.
- ☐ Claims _____ are rejected.
- ☐ Claims _____ are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.
- ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
- ☒ The proposed drawing correction, filed 12/22/00, has been ☒ approved; ☐ disapproved (see explanation).
- ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____.
- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
- ☐ Other

EXAMINER'S ACTION

DETAILED ACTION

Election/Restriction

1. Claim 15 is objected to being drawn to a non-elected embodiment. Species a1 was elected without traverse in paper #11. Claim 15 is withdrawn from consideration.

IDS

2. Examiner has considered Japanese abstract 54083374. Nevertheless, examiner was not able to obtain a copy of the patent itself. The abstract submitted does not include any drawings. Therefore, the abstract has been considered to the degree that can be comprehended from the written text. Examiner requests that applicant provide a copy of the patent if applicant would like the entire document considered.

Drawings

3. The drawing corrections submitted 12/22/00 were approved. Applicant has, however, submitted new claim 13 including a chip element with bump leads. This feature is not shown in the figures. The drawings must show every feature of the invention specified in the claims, 37 CFR 1.83(a). Therefore, the feature must be canceled from the claims, or the drawings will be objected to for not showing the feature. No new matter should be entered.

Claim Objections

4. Claim 13, line 6, "elements" should be singular.

Treatment of Claims Based on Prior Art

5. 35 USC 102 includes the following sections which state:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

6. Claims 7, 9 are rejected under 35 USC 102(b) as being anticipated by Japanese abstract 07263849 to Yusuke.

Claim 7: Yusuke a board (3) with layer (4), the layer having a pattern with a bonding area (5).

Notch or recess (8) is proximate the bonding area and does not extend within it. The notch or recess narrows the pattern to form a barrow pattern part.

Claim 9: The substrate of the board (3) is the main body, and the pattern is narrowed at the bonding area.

7. 35 USC 103(a) states:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Obviousness under 35 USC 103(a) is determined against a background established by the factual inquires set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), which are summarized in items 1-4 below.

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 USC 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 USC 103© and potential 35 USC 102(f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 13-14 are rejected under 35 USC 103(a) as being unpatentable over Applicant's figure 11 and Mims (US 3893223).

Figure 11 of the present application disclose all of the elements of claims 13-14 except for two grooves proximate a bonding areas to place the area therebetween. Since applicant has elected species a1, the grooves are interpreted to mean isolated notches or recesses.

Mims teaches to place grooves (with the conductive material all the way removed) on either side of a bonding area where a row of bonding areas is being ultrasonically attached. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to place grooves between the bonding areas of figure 11, as taught by Mims, to prevent "breaking an adjacent and previously made weld," Mims at column 2, line 54. Mims also teaches that the grooves should extend perpendicular to the direction of the vibration.

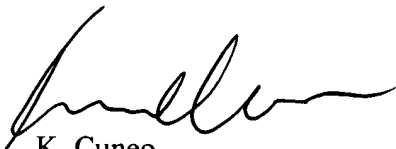
Response to Arguments

10. Applicant's arguments are moot in view of the new grounds of rejection.

In order to expedite prosecution, examiner encourages the following. If in response to this office action applicant argues that the teachings of Mims are not applicable to figure 11, applicant should specifically point out why the teachings are not applicable, because Mims teaches the same configuration of grooves for exactly the same reason.

Closing

11. Any inquiries related to the examination of this application should be directed to Ex. K. Cuneo at (703) 308-1233 or her supervisor Ex. J Gaffin at (703) 308-3301. Inquiries of a general nature should be directed to the receptionist of Group 2800 at (703) 308-0956. The fax numbers for Group 2800 are (703) 305-7722 and 7724.



K. Cuneo
Patent Examiner Group 2841
March 10, 2001